

**SUBSTITUTE ABSTRACT OF THE DISCLOSURE**

A denitrification reactor with a culture fixed to an organized plastic-type support is combined with an installation for the nitrification and elimination of the carbon-based pollution. The reactor is supplied with a mixture of the raw effluent to be treated and of the effluent originating from the installation for the nitrification and elimination of the carbon-based pollution. The reactor includes two denitrification compartments (3, 4) arranged in parallel and operating alternately between a filling phase (denitrification and self-cleaning-out of the excess biomass); and an emptying phase (denitrification and drainage of the excess biomass). A system for supplying the mixture of effluents consisting of a rotary arm (11) which alternately supplies the mixture to each of the compartments.